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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,220	08/22/2006	Paul A. Stucky	60469-096 PUS1; 05222-US	1465
26096 7590 06/16/2008 CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			EXAMINER SUN, XIUQIN	
			ART UNIT 2863	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,220	Applicant(s) STUCKY ET AL.	
	Examiner XIUQUIN SUN	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-13 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 2,10,14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/22/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-9, 11-13 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robar et al. (U.S. Pat. No. 7123030) in view of Parrini et al. (U.S. Pat. No. 7182174).

Regarding claim 1, Robar et al. teach a support structure monitoring system for an elevator (Abstract), comprising: a characteristic sensor that obtains a measured electrical characteristic of at least one portion of the support structure (col. 7, lines 4-10); and a processor that translates at least one of the measured electrical characteristic and an electrical characteristic of at least one portion of a virgin support structure to correspond with a reference temperature to reflect an effect of a temperature in the hoistway, wherein a value corresponding to the measured electrical characteristic is a measured value and a value corresponding to the electrical characteristic of the virgin support structure is a reference value (col. 7, lines 4-48), wherein the processor calculates a difference between the measured value and the reference value and compares a value corresponding to the difference with a predetermined threshold to determine a support structure condition (col. 7, lines 30-37).

Robar et al. do not mention expressly: at least one temperature sensor disposed in a hoistway; and said temperature in the hoistway being indicated by said at least one temperature sensor.

Parrini et al. teach a method and system for measuring temperature in a hoistway of an elevator, including: at least one temperature sensor disposed in a hoistway (col. 4, lines 33-44); and said temperature in the hoistway being indicated by said at least one temperature sensor (col. 4, lines 33-44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Parrini et al. in the invention of Robar et al. in order to provide a mechanism for measuring the temperature in a hoistway of an elevator which can be used to detect an emergency condition of the elevator supporting system (Robar et al., col. 7, lines 38-48; Parrini et al., col. 4, lines 33-44).

Regarding claim 8, Robar et al. teach an elevator support structure assembly (Abstract), comprising: a characteristic sensor that obtains a measured electrical characteristic of at least one portion of the elevator support structure (col. 7, lines 4-10); and a processor that determines a temperature associated with at least one portion of the elevator support structure, and translates at least one of the measured electrical characteristic and an electrical characteristic of at least one portion of a virgin support structure to correspond with a reference temperature to reflect an effect of a temperature as indicated by said at least one temperature sensor, wherein a value corresponding to the measured electrical characteristic is a measured value and a value corresponding to the electrical characteristic of the virgin support structure is a

reference value (col. 7, lines 4-48), and calculates a difference between the measured value and the reference value and compares a value corresponding to the difference with a predetermined threshold to determine a support structure condition (col. 7, lines 30-37).

Robar et al. do not mention expressly: at least one temperature sensor; said temperature is determined from said at least one temperature sensor.

Parrini et al. teach a method and system for measuring temperature in a hoistway of an elevator, including: at least one temperature sensor disposed in a hoistway (col. 4, lines 33-44); and said temperature in the hoistway being indicated by said at least one temperature sensor (col. 4, lines 33-44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Parrini et al. in the invention of Robar et al. in order to provide a mechanism for measuring the temperature in a hoistway of an elevator which can be used to detect an emergency condition of the elevator supporting system (Robar et al., col. 7, lines 38-48; Parrini et al., col. 4, lines 33-44).

Regarding claim 13, Robar et al. teach a method of monitoring an elevator support structure condition (Abstract), comprising: obtaining a measured electrical characteristic of at least one portion of the support structure (col. 7, lines 4-10); translating at least one of the measured electrical characteristic and an electrical characteristic of at least one portion of a virgin support structure to reflect an effect of a measured temperature, wherein a value corresponding to the measured electrical characteristic is a measured value and a value corresponding to the electrical

characteristic of the virgin support structure is a reference value (col. 7, lines 4-48); calculating a difference between the measured value and the reference value (col. 7, lines 30-37); and comparing a value corresponding to the difference with a predetermined threshold to determine a support structure condition (col. 7, lines 30-37).

Robar et al. do not mention expressly: measuring a temperature associated with at least a portion of the support structure.

Parrini et al. teach a method and system for measuring temperature in a hoistway of an elevator, including: at least one temperature sensor disposed in a hoistway (col. 4, lines 33-44); and said temperature in the hoistway being indicated by said at least one temperature sensor (col. 4, lines 33-44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Parrini et al. in the invention of Robar et al. in order to provide a mechanism for measuring the temperature in a hoistway of an elevator which can be used to detect an emergency condition of the elevator supporting system (Robar et al., col. 7, lines 38-48; Parrini et al., col. 4, lines 33-44).

Regarding claim 3, Robar et al. teach the claimed invention (col. 7, lines 38-48).

Regarding claims 4, 5, 11 and 16, Robar et al. teach: wherein the processor divides a difference between the measured value and the reference value by the reference value to obtain a percent change value, which acts as the value corresponding to the difference (col. 7, lines 4-10, inherent to the definition of the correlation between the measured values and the predetermined reference values), and

wherein the processor indicates a worn support structure if the percent change value exceeds the predetermined threshold (col. 7, lines 30-37); wherein the value corresponding to the difference is the difference itself between the measured value and the reference value (col. 7, lines 4-10, inherent to the definition of the correlation between the measured values and the predetermined reference values), and wherein the processor indicates a worn support structure if the difference exceeds the predetermined threshold (col. 7, lines 30-37).

Regarding claims 6, 7, 12, 17 and 18, Robar et al. teach: wherein the processor calculates the reference value based on measured temperature readings (col. 7, lines 38-48).

Robar et al. do not mention expressly: wherein said at least one temperature sensor comprises a plurality of temperature sensors, and said temperature readings obtained from the plurality of temperature sensors; wherein the plurality of temperature sensors are spaced a uniform distance from each other along the hoistway.

The teaching of Parrini et al. includes: wherein said at least one temperature sensor comprises a plurality of temperature sensors, and said temperature readings obtained from the plurality of temperature sensors (col. 4, lines 33-44); wherein the plurality of temperature sensors are spaced a uniform distance from each other along the hoistway (col. 4, lines 33-44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Parrini et al. in the invention of Robar et al. in order to provide a mechanism for measuring the temperature in a hoistway of

an elevator which can be used to detect an emergency condition of the elevator supporting system (Robar et al., col. 7, lines 38-48; Parrini et al., col. 4, lines 33-44).

Regarding claim 9, Robar et al. teach the claimed invention (col. 7, lines 30-37).

Regarding claim 19, Robar et al. teach the claimed invention (col. 7, lines 38-48).

Allowable Subject Matter

3. Claims 2, 10, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

4. The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claims 2 and 10 is the inclusion of the limitation that: the processor calculates the reference value by translating the electrical characteristic of said at least one portion of the virgin support structure, wherein the reference temperature is equal to the temperature in the hoistway as indicated by said at least one temperature sensor and the measured value is equal to the measured electrical characteristic. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 14 is the inclusion of the limitation that: the step of determining the reference value comprises translating the electrical characteristic of each portion of the virgin support structure based on the temperature of that portion and summing the translated electrical characteristics of the portions of the virgin support structure. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claim 15 is the inclusion of the limitation that: the translating step determines the reference value by translating the electrical characteristic of said at least one portion of the virgin support structure, wherein the reference temperature is equal to the measured temperature and the measured value is equal to the measured electrical characteristic. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2863

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. S./

Examiner, Art Unit 2863

/Tung S. Lau/

Tung S. Lau, Art Unit 2863

Primary Examiner

June 9, 2008